



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)



Applicant's or agent's file reference OPP040373KR	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/KR2004/003444</b>	International filing date (day/month/year) <b>24 DECEMBER 2004 (24.12.2004)</b>	(Earliest) Priority Date (day/month/year) <b>26 DECEMBER 2003 (26.12.2003)</b>
Applicant  <b>Electronics and Telecommunications Research Institute et al</b>		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the drawings to be published with the abstract is Figure No. 9

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

- b. ☐ none of the figure is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2004/003444

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC7 H04B 7/26**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H04B 7/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

KR : IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

KIPASS, DELPHION, ESPACENET &amp; Keywords : wireless, broadband, power, save, sleep, group and similar terms

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6622251 B1 ( TELEFONAKTIEBOLAGET LM ERICSSON ) 16 September 2003 * the whole document *	1 - 21
A	Carla-Fabiana Chiasserini ; Ramesh R. Rao,; "Improving energy saving in wireless systems by using dynamic power management" ; Wireless Communications, IEEE Transactions on , Volume: 2 , Issue: 5 , September 2003, * pages 1090-1100 *	1 - 21
A	US 5625882 A1 ( MOTOROLA, INC. ) 29 April 1997 * the whole document *	1 - 21
A	US 6438375 B1 ( TELEFONAKTIEBOLAGET LM ERICSSON ) 20 August 2002 * the whole document *	1 - 21
A	WO 96/19084 A1 ( TELEFONAKTIEBOLAGET LM ERICSSON ) 20 June 1996 * the whole document *	1 - 21
P, X	"Enhancement on Sleep Mode Operation by Grouping": IEEE C802.16e-04/05r1, 15 January 2004 <retrieved from the internet> <URL: <a href="http://www.ieee802.org/16/tge/contrib/C80216e-04_05r1.pdf">http://www.ieee802.org/16/tge/contrib/C80216e-04_05r1.pdf</a> >	1 - 21

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

18 MARCH 2005 (18.03.2005)

Date of mailing of the international search report

19 MARCH 2005 (19.03.2005)

Name and mailing address of the ISA/KR

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2004/003444

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US	6622251 B1	16-09-2003	AU 771981 B2	08-04-2004
			AU 4159500 A	23-10-2000
			AU 4293701 A	24-09-2001
			CA 2369049 A1	12-10-2000
			CN 1354939 A	19-06-2002
			EP 1169818 A1	09-01-2002
			JP 2002541731 T	03-12-2002
			WO 0060811 A1	12-10-2000
			WO 0169859 A1	20-09-2001
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			CA 2365616 A1	08-09-2000
			CN 1349725 A	15-05-2002
			EP 1157579 A1	28-11-2001
			JP 2002538744 A	12-11-2002
			TW 493356 B	01-07-2002
			WO 0052948 A1	08-09-2000
WO	9619084 A1	20-06-1996	AU 4320096 A	03-07-1996
			CN 1175339 A	04-03-1998
			EP 0797899 A1	01-10-1997
			JP 10510961T T	20-10-1998
			US 5745860 A	28-04-1998